

**REMARKS**

Continued examination and reconsideration of the application in view of the amendments and the following remarks is respectfully requested.

**Status of the Claims**

Claims 1-20 are pending. Claims 1, 17, and 19 have been amended. New claim 20 has been added. No new matter has been added.

**Rejection Under 35 U.S.C. § 112**

Applicant presumes the rejections under 35 U.S.C. § 112 were resolved with the Amendment filed May 9, 2006 as the Examiner's stated reasons that the application is not in condition for allowance did not mention any rejections under 35 U.S.C. § 112.

**Rejection Under 35 U.S.C. § 103**

Claims 1-19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Iizuka (U.S. Patent No. 6,435,713) in view of Alexandrescu (U.S. Patent No. 6,272,368) and Wakabayashi (U.S. Patent No. 6,407,738).

The Examiner contends that Iizuka discloses most of the claimed features. The Examiner acknowledges that Iizuka failed to disclose a shape data registering means for registering external shape data of three dimensional models corresponding to three dimensional shapes of objects, wherein the models are in voxel data tree format. However, the Examiner relies on Alexandrescu as disclosing "a shape data registering means (11, 15) for registering external shape data of three-dimensional models in triangular format corresponding to three-dimensional shapes of an x-ray imaging system (1, 2, 3) and a patient support (8); and a position relation detecting means for obtaining in real time information regarding positional relations of the x-ray imaging system and the patient support based on current positions of x-ray imaging system

and the patient support, and the external shape data of the three dimensional model.” (March 9, 2006 Detailed Action, page 3). The Examiner further relies on Wakabayashi as disclosing the use of “a three-dimensional model formulation using voxel data tree format.” (March 9, 2006 Detailed Action, page 4). The Examiner states that it would have been obvious for a person of ordinary skill in the art at the time of the invention to combine Iizuka, Alexandrescu, and Wakabayashi to achieve the claimed invention. (March 9, 2006 Detailed Action, page 4.)

The Examiner states that Applicant’s argument with respect to Wakabayashi in the May 9, 2006 Amendment was not persuasive. Applicant maintains all arguments presented in the May 9, 2006 Amendment regarding Wakabayashi and the other references.

However, in the interest of furthering prosecution of this application, claims 1, 17, and 19 have been amended to feature “a shape data registering means of the X-ray imaging system for pre-registering three dimensional external shapes corresponding to three dimensional external shapes of the X-ray imaging system.” New claim 20 has been added to include the features that the shape data is registered in advance and that the shape registration data is initially obtained in Standard Triangle Language (STL) format, converted to voxel format, and then converted to Binary Separated Partition (BSP) data. Support for these claim amendments can be found in at least pages 11 and 12 of the Specification.

Applicant submits the prior art of record does not teach or suggest pre-registration of shape data as featured in claims 1, 17, and 19 nor does the prior art teach or suggest advance registration of shape data wherein the shape data is obtained in Standard Triangle Language format, converted into voxel format data, and then converted into Binary Separated Partition data as featured in new claim 20. Applicant also notes that the Examiner acknowledged that the prior art of record does not disclose or suggest pre-registration of the shape data when notifying Applicant’s representative of the newly discovered reference in August 2005.

Furthermore, the Examiner has misconstrued the Alexandrescu reference. According to the Examiner, Alexandrescu discloses a shape data registering means using Standard Triangle

Language (STL). The Examiner refers to Alexandrescu's disclosure of "active or passing triangular 3D technique" in support of this argument. (March 9, 2006 Detailed Action, page 3). The triangular 3D technique disclosed by Alexandrescu refers to using cameras in real time along with known lighting angles to convert the 2D camera images to a 3D model of the x-ray diagnostic device using triangulation techniques, not STL.

Accordingly, claims 1, 17, and 19-20 are in condition for allowance. Claims 2-16 depend from claim 1 or an intervening claim, and recite additional features not present in claim 1. Applicants submit that claims 2-16 are patentable over Iizuka, Alexandrescu, and Wakabayashi for at least the same reasons as demonstrated above with respect to claim 1. Claim 18 depends from claim 17 and contains additional features not present in claim 17. Applicants submit that claim 18 is patentable over Iizuka, Alexandrescu, and Wakabayashi for at least the same reasons as demonstrated above with respect to claim 17.

Applicants respectfully request reconsideration and withdrawal of the rejection.

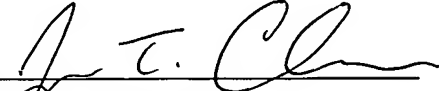
### CONCLUSION

Each and every point raised in the Final Office Action dated March 9, 2006 and maintained in the May 23, 2006 Advisory Action has been addressed on the basis of the above amendments and remarks. In view of the foregoing it is believed that claims 1-20 are in condition for allowance and it is respectfully requested that the application be reconsidered and that all pending claims be allowed and the case passed to issue.

If there are any other issues remaining which the Examiner believes could be resolved through a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

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Respectfully submitted,

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